

INTERNATIONAL SEARCH REPORT

I nat Application No
PCT/US2004/039582

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7	B65H37/00	B65D83/08	B65H1/04	B65H3/02
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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7	B65D	B65H
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 42 05 805 A1 (FRIEDRICH SANNER GMBH & CO KG SPRITZGUSSWERK) 2 September 1993 (1993-09-02) the whole document	1,6
A	US 6 578 732 B1 (MABRY, HELLEN) 17 June 2003 (2003-06-17) the whole document	1,6
A	US 4 832 229 A (HACKMANN ET AL) 23 May 1989 (1989-05-23) column 1, line 6 - column 4, line 10; figures	7-11
A	US 6 268 032 B1 (MERTENS TIMOTHY A ET AL) 31 July 2001 (2001-07-31) column 17, line 6 - line 45; figures 20,21	7,8
		-/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the International filing date but later than the priority date claimed

- "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the International search

Date of mailing of the International search report

6 April 2005

18/04/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5018 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Raven, P

INTERNATIONAL SEARCH REPORT

Final Application No
PCT/US2004/039582

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 299 018 B1 (KIMBRELL, KIMBERLY L) 9 October 2001 (2001-10-09) the whole document -----	7,8

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/039582

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
DE 4205805	A1	02-09-1993	NONE		
US 6578732	B1	17-06-2003	NONE		
US 4832229	A	23-05-1989	DE AT DE EP	3523173 A1 45928 T 3665293 D1 0206185 A2	08-01-1987 15-09-1989 05-10-1989 30-12-1986
US 6268032	B1	31-07-2001	AU CA EP EP WO	6145798 A 2303018 A1 1302333 A2 1027191 A1 9917906 A1	27-04-1999 15-04-1999 16-04-2003 16-08-2000 15-04-1999
US 6299018	B1	09-10-2001	NONE		